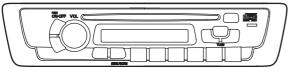
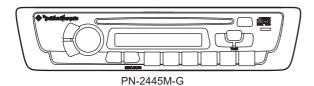
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Service Manual



PN-2445M-A, M-B, M-C, M-D, M-E, M-F



NISSAN Automobile Genuine FM/AM Radio CD Stereo

Model PN-2445M-A

(Genuine No.28185 4Z500/ID No.CY290)

Model PN-2445M-B

(Genuine No.28185 4Z510/ID No.CY300)

Model PN-2445M-C

(Genuine No.28185 4Z520/ID No.CY310)

Model PN-2445M-D

(Genuine No.28185 4Z400/ID No.CY260)

Model PN-2445M-E

(Genuine No.28185 4Z410/ID No.CY270)

Model PN-2445M-F

(Genuine No.28185 4Z420/ID No.CY280)

Model PN-2445M-G

(Genuine No.28185 4Z700/ID No.CY320)

SPECIFICATIONS

Radio section

Tuning system: PLL frequency synthesizer system

Receive range: AM 530kHz to 1,710kHz

FM 87.75MHz to 107.9MHz

Intermediate frequency:

AM $450 \pm 3kHz$

 $FM~10.7\pm0.3MHz$

Quieting sensitivity: AM Less than 32dB μ (at 20dB S/N)

FM Less than 10dB μ (at 30dB S/N)

Separation: FM More than 22 + 5/ - 7dB(1kHz)

AM More than 45dB FM More than 50dB

Auto tuning stop sensitivity:

S/N ratio:

AM 32 ± 6 dB μ (600/1000/1400kHz)

-1-

FM 25 \pm 6dB μ

(87.9/98.1/107.9MHz)

CD section

Disc: 12cm Disc

Separation: More than 50dB(Filter:20kHz LPF)

S/N ratio: More than 74dB
Distortion: Less than 0.4%
(Filter: 20kHz LBE

(Filter:20kHz LPF)

General

Load impedance: 4 /CH Power output: 30W x 4

Power supply voltage: DC13.2V(10.8V to 16.0V)

Negative ground

Back-up consumption: Less than 3mA

Dimensions(mm): $180(W) \times 52(H) \times 159(D)$

Weight: 1.4kg

Specifications and design are subject to change without

notice for further improvement.

PN-2445M

COMPONENTS

PN-2445M-A/M-B/M-C/M-D/M-E/M-F/M-G

Main unit - - - - 1

NOTE

We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.

DIFFERENCE FEATURE LIST

Esctcheon	Equalizer
Black	
Brown	
Gray	
Black	×
Brown	×
Gray	×
Black	
	Black Brown Gray Black Brown Gray

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.

The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.

The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.

2. Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.

If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

3. Check for safety after repair.

Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.

If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

4. Caution in removal and making wiring connection to the parts for the automobile.

Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.

5. Cautions regarding chips.

Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.

6. Cautions in handling flexible PWB

Before working with a soldering iron, make sure that the iron tip temperature is around 270 . Take care not to apply the iron tip repeatedly(more than three times)to the same patterns. Also take care not to apply the tip with force.

- Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit
- 8. Cautions in checking that the optical pickup lights up. The laser is focused on the disc reflection surface through the lens of the optical pickup. When checking that the laser optical diode lights up, keep your eyes more than 30cms away from the lens. Prolonged viewing of the laser within 30cms may damage your eyesight.
- Cautions in handling the optical pickup
 The laser diode of the optical pickup can be damaged by
 electrostatic charge caused by your clothes and body.
 Make sure to avoid electrostatic charges on your clothes
 or body, or discharge static electricity before handling the
 optical pickup.

9-1. Laser diode

The laser diode terminals are shorted for transportation in order to prevent electrostatic damage. After replacement, open the shorted circuit. When removing the pickup from the mechanism, short the terminals by soldering them to prevent this damage.

9-2. Actuator

The actuator has a powerful magnetic circuit. If a magnetic material is put close to it. Its characteristics will change. Ensure that no foreign substances enter through the ventilation slots in the cover.

9-3. Cleaning the lens

Dust on the optical lens affects performance. To clean the lens, apply a small amount of isopropyl alcohol to lens paper and wipe the lens gently.

ADJUSTMENT

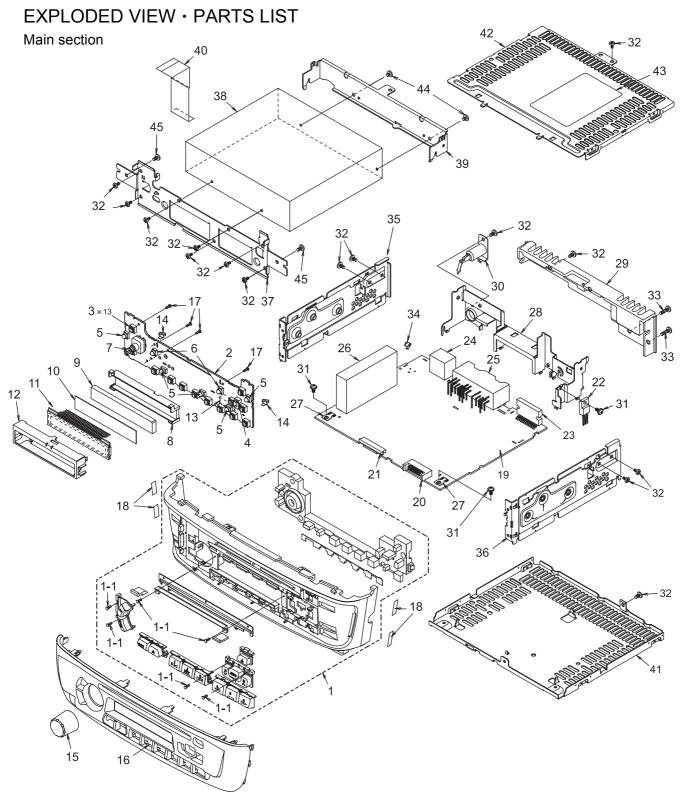
Item	Procedure	Measuring instrument
FM noise convergence	1. Input the 98.1MHz/55dB μ (1kHz 30% MOD) signal. 2. Adjust the outputs to $$ - 18 \pm 3dB by VR102 when the SG output is set to $$ - 20dB μ .	SSG AC volt meter
Clock accuracy	 Turn off and on the ACC switch twice, while holding the buttons of power switch and CD eject to make the unit the test mode. Set a universal timer to TP101(T-BASE), adjust TC201 so that a reading of the meter is 0 ± 0.1 sec./day. 	Chronometer

EXPLANATION OF IC

052-1163-20 uPD178076GF-540-3BA CD & Radio System control

	3076GF-540-3BA CD & Radio System control		
1.Terminal Description		pin 48: NU	: - : Not in use.
pin 1: EJECT SW	: IN: Eject switch ON signal input.	pin 49: IC	:IN: Connected to the ground.
pin 2: NU	: - : Not in use.	pin 50: RESET	:IN: Reset signal input.
pin 3: NU	: - : Not in use.	pin 51: NU	: - : Not in use.
pin 4: VOL DATA	: O : The serial data output to the volume IC.	pin 52: NU	: - : Not in use.
pin 5: VOL CLK pin 6: VOL CE	O: The clock pulse output to the volume IC. O: The chip enable signal output to the vol-	pin 53: ST/TWEET	:I/O: Outputs "L" at AM 900kHz receiving. Inputs "L" at FM stereo receiving.
	ume IC.	pin 54: CLK INT	:IN: Without a clock = "H".
pin 7: NU	: - : Not in use.	pin 55: AUX ON	:IN: AUX ON signal input.
pin 8: LCD DI	:IN: The srial data input from the LCD driver.	pin 56: TEST	: - : For the Test.
pin 9: LCD DO	: O : The srial data output to the LCD driver.	pin 57: LCD ON	: O : LCD back light ON signal output.
pin 10: LCD CLK	: O : The clock pulse output to the LCD driv-	pin 58: NU	: - : Not in use.
	er.	pin 59: BEEP	: O : Beep out.
pin 11: LCD CE	: O : The chip enable signal output to the LCD driver.	pin 60: NU	: - : Not in use.
pin 12: NU	: - : Not in use.	pin 61: NU	: - : Not in use.
pin 13: POWER SW	:IN: Power switch ON signal input.	pin 62: CD RESET	: O : The reset pulse output to the CD IC.
pin 14: VOL 1	:IN: Volume control pulse input from the rota-	pin 63: NU	: - : Not in use.
piii 14. VOL 1	ry encoder.	pin 64: AF MUTE	: O : Audio frequency signal muting.
pin 15: VOL 2	:IN: Volume control pulse input from the rota-	pin 65: NU	: - : Not in use.
•	ry encoder.	pin 66: FM ON	: O : FM ON signal output.
pin 16: ILL	: IN: Illumination ON signal input.	pin 67: AM ON	: O : AM ON signal output.
pin 17: NU	: - : Not in use.	pin 68: CD ON	: O : CD ON signal output.
pin 18: NU	: - : Not in use.	pin 69: NU	: - : Not in use.
pin 19: NU	: - : Not in use.	pin 70: NU	: - : Not in use.
pin 20: NU	: - : Not in use.	pin 71: NU	: - : Not in use.
pin 21: NU	: - : Not in use.	pin 72: RF MUTE	: O : Radio frequency signal muting.
pin 22: NU	: - : Not in use.	pin 73: DX/LO	: O : DX/Local select signal output.
pin 23: NU	: - : Not in use.	pin 74: SYS ON	: O : System ON signal output.
pin 24: NU	: - : Not in use.	pin 75: AMP ON	: O : Audio power amplifier ON signal output.
pin 25: NU	: - : Not in use.	pin 76: COMBI ON	: O : Combi ON signal output.
pin 26: NU	: - : Not in use.	pin 77: NU	: - : Not in use.
pin 27: A VDD	: - : Positive supply voltage for the Analog sec-	pin 78: ACC IN	:IN: ACC detection signal intput.
	tion.	pin 79: RADIO ON	: O : Radio ON signal output.
pin 28: NU	: - : Not in use.	pin 80: NU	: - : Not in use.
pin 29: NU	: - : Not in use.	pin 81: SBSY	:IN: Sub code sync input.
pin 30: NU	: - : Not in use.	pin 82: GND	: - : Ground.
pin 31: NU	: - : Not in use.	pin 83: CD CONNECT	:IN:CD connection check signal input.
pin 32: A VSS	: - : Analog ground.	pin 84: BUS 0	:I/O: CD IC Data input / output.
pin 33: REG CPU	: IN: The capacitor connection terminal to sup-	pin 85: BUS 1	:I/O: CD IC Data input / output.
	press the ripple.	pin 86: BUS 2	:I/O: CD IC Data input / output.
pin 34: VDD	: - : Positive supply voltage.	pin 87: BUS 3	:I/O: CD IC Data input / output.
pin 35: REG OSC	:IN: The capacitor connection terminal to sup- press the ripple.	pin 88: BUS CK	: O : Clock pulse output to the CD IC.
pin 36: X 2	: - : Crystal connection.	pin 89: CCE	: O : The chip enable signal output.
pin 37: X 1	: - : Crystal connection.	pin 90: GS1 TEST	: O : Test data output.
-	: - : Ground.	pin 91: S STOP	:IN: In side limit signal input.
pin 38: GND	: - : Not in use.	pin 92: CHU SW	:IN:CD disc chucking signal input.
pin 39: NU	: - : Ground.	pin 93: TR B	:IN: Photo sensor signal input from the CD
pin 40: GND pin 41: AM IF	:IN:Input terminal of the internal universal	pin 94: TR A	mechanism. :IN:Photo sensor signal input from the CD
pin 42: FM IF	counter for AM IF. :IN:Input terminal of the internal universal	pin 95: LD CONT	mechanism. :IN:Loading control signal input.
nin 42.1/DD DII	counter for FM IF.	pin 96: LD MUTE	O: Muting signal output to the CD mecha-
pin 43: VDD PLL pin 44: FM OSC	: - : Positive supply voltage for the PLL. :IN: Input terminal of the internal counter for	pin 97: NU	nism. : - : Not in use.
	FM OSC(Local Oscillation).	pin 98: BAND SEL	:IN: Band selection input.
pin 45: AM OSC	:IN:Input terminal of the internal counter for AM OSC(Local Oscillation).	pin 99: VDD	: - : Positive supply voltage.
pin 46: GND PLL	: - : Ground for the PLL.	pin100: GND	: - : Ground.
pin 47: Voltage Tune	: O : PLL error output.		

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NO.	PART NO.	DESCRIPTION	Q'TY
1	940-7943-86 940-7943-87 940-7943-88	ESCUTCHEON ASSY (M-A,M-D,M-G) ESCUTCHEON ASSY(M-B,M-E) ESCUTCHEON ASSY(M-C,M-F)	1
1-1	716-0872-00	PAD SCREW(M1.7 x 5 SILVER)	6
2	039-2055-00	SWITCH PWB (WITHOUT COMPONENT)	1
3	013-6300-51	SWITCH	13
4	013-6302-50	SWITCH	1
5	017-0433-58	PILOT LAMP(14V40mA)	5
6	017-0447-59	PILOT LAMP(8V105mA)	2
7	016-0010-15	VR-W/SHAFT	1

NO.	PART NO.	DESCRIPTION	Q'TY
8	335-6541-80	ILLUMI HOLDER	1
9	335-5777-00	LCD ILLUMI	1
10	335-5779-00	COLOR FILTER	1
11	379-1217-30	INDICATOR	1
12	331-2448-01	LCD COVER	1
13	074-1151-14	OUTLET SOCKET(14P)	1
14	073-0774-00	TERMINAL	2
15	380-5515-80	KNOB	1
	•	•	

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NO.	PART NO.	DESCRIPTION	Q'TY
16	373-0957-04 373-0957-05 373-0957-06 373-0957-07 373-0957-08 373-0957-09 373-0957-22	DIAL COVER(M-A) DIAL COVER(M-B) DIAL COVER(M-C) DIAL COVER(M-D) DIAL COVER(M-E) DIAL COVER(M-F) DIAL COVER(M-G)	1
17	716-0872-00	PAD SCREW(M1.7 × 5 SILVER)	4
18	347-2510-00	CUSHION TAPE	4
19	039-2054-00	MAIN PWB (WITHOUT COMPONENT)	1
20	076-0540-14	PLUG(14P)	1
21	074-1191-26	OUTLET SOCKET(26P)	1
22	103-2012-00	TRANSISTOR(2SD2012)	1
23	051-2040-00	IC(TA8276H)	1
24	074-0850-08	OUTLET SOCKET(DIN8P)	1
25	074-1068-11	OUTLET SOCKET	1
26	880-1917B	AM/FM TUNER	1
27	073-0762-90	TERMINAL	2
28	307-0683-05	REAR PLATE	1
29	313-1825-15	HEAT SINK	1
30	092-0702-00	ANT RECEPT	1

NO.	PART NO.	DESCRIPTION	Q'TY
31	716-0878-00	IT SCREW(M2.6 × 5)	3
32	714-2606-81	MACHINE SCREW(M2.6 × 6)	15
33	714-2612-81	MACHINE SCREW(M2.6 x 12)	2
34	073-0774-00	TERMINAL	1
35	305-0316-00	SIDE COVER(L)	1
36	305-0317-00	SIDE COVER(R)	1
37	331-3268-00	ES-PLATE	1
38	929-0220-81	CD MECHANISM	1
39	331-3254-10	MECHANISM BRACKET	1
40	816-2549-00	FLAT WIRE	1
41	311-1833-10	LOWER CASE	1
42	310-1739-10	UPPER CASE	1
43	286-9269-13 286-9269-14 286-9269-15 286-9269-16 286-9269-17 286-9269-18 286-9269-19	SETPLATE(M-A) SETPLATE(M-B) SETPLATE(M-C) SETPLATE(M-D) SETPLATE(M-E) SETPLATE(M-F) SETPLATE(M-F)	1
44	714-2603-81	MACHINE SCREW(M2.6 × 3)	2
45	702-3008-81	TAP SCREW(3×8)	2

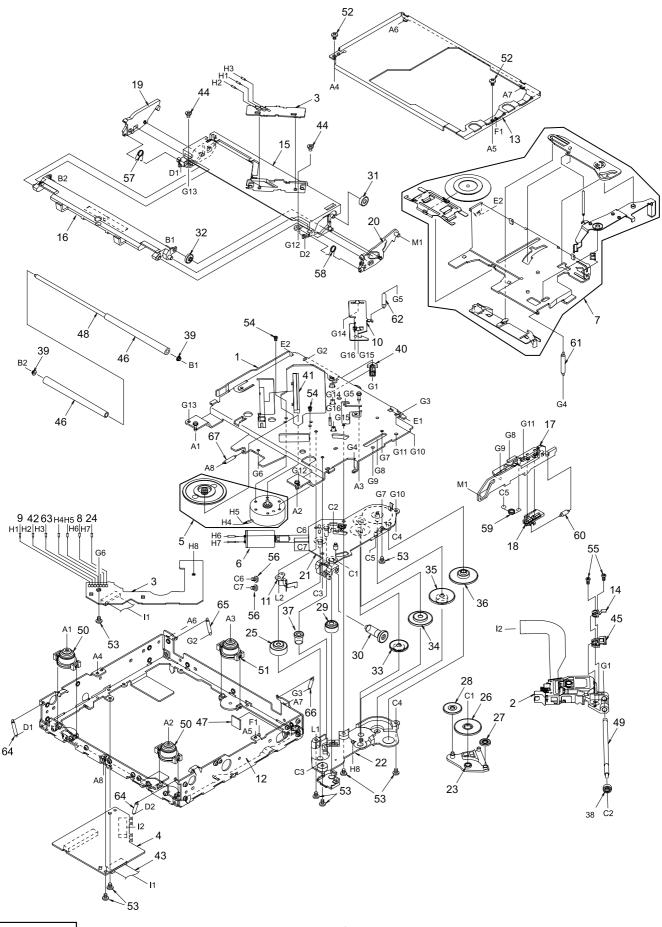
CD mechanism section : 929-0220-81

The exploded view of CD mechanism is on page 6.

NO.	PART NO.	DESCRIPTION	Q'TY	NO.	PART NO.	DESCRIPTION	Q'TY
1	966-0595-24	DRIVE PLATE ASSY	1	30	621-0613-20	ROLLER GEAR B	1
2	969-0060-30	PICK UP UNIT	1	31	621-0614-20	ROLLER GEAR C	1
3	039-1944-21	LED PWB	1	32	621-0615-21	ROLLER GEAR D	1
4	039-1945-20	(WITHOUT COMPONENT) CD PWB	1	33	621-0616-20	POWER GEAR A	1
4	039-1945-20	(WITHOUT COMPONENT)	ı	34	621-0617-20	POWER GEAR B	1
5	SMA-182-100	MOTOR ASSY(SPINDLE)	1	35	621-0618-20	POWER GEAR C	1
6	SMA-183-100	MOTOR ASSY(SLED)	1	36	621-0619-20	POWER GEAR D	1
7	HBS-516-100	CLAMPER SUB ASSY	1	37	621-0620-20	THREAD GEAR A	1
8	803-4906-60	VINYL COAT WIRE(ORG)	1	38	621-0621-20	THREAD GEAR B	1
9	816-2591-00	LEAD WIRE(YEL)	1	39	621-0622-21	ROLLER SLEEVE	2
10	620-1025-21	ID-LOCK PLATE	1	40	621-0623-21	LS-HOLDER	1
11	620-1026-21	SPRING PLATE	1	41	621-0624-21	GUIDE RAIL	1
12	620-1027-24	LOWER CHASSIS	1	42	816-2593-00	LEAD WIRE(PUR)	1
13	620-1028-21	UPPER CHASSIS	1	43	816-2542-01	FLAT WIRE(10P)	1
14	620-1029-21	SH-SPRING	1	44	716-3473-00	SCREW	2
15	621-0598-25	UPPER GUIDE	1	45	621-0628-21	SH-BASE	1
16	621-0599-25	ROLLER GUIDE	1	46	621-0629-20	LOADING ROLLER	2
17	621-0600-25	SHIFT LEVER	1	47	345-8704-20	CUSHION RUBBER	1
18	621-0601-21	RACK	1	48	622-1571-21	ROLLER SHAFT	1
19	621-0602-22	LOCK ARM L	1	49	624-0018-01	LEAD SCREW	1
20	621-0603-23	LOCK ARM R	1	50	629-0081-20	DAMPER F	2
21	621-0604-21	GEAR BASE	1	51	629-0082-20	DAMPER R	1
22	621-0605-21	GEAR COVER	1	52	714-2003-81	MACHINE SCREW	2
23	621-0606-21	IDLE CASE	1	53	716-1507-00	SCREW	8
24	816-2590-00	VINYL COAT WIRE(GRN)	1	54	716-1733-00	SCREW	2
25	621-0608-21	SECOND GEAR	1	55	716-3469-00	SPECIAL SCREW	2
26	621-0609-20	BASE GEAR	1	56	716-3446-00	SCREW	2
27	621-0610-20	IDLE GEAR A	1	57	750-3465-21	ROLLER SPRING L	1
28	621-0611-20	IDLE GEAR B	1	58	750-3466-20	ROLLER SPRING R	1
29	621-0612-21	ROLLER GEAR A	1	59	750-3467-21	SHIFT SPRING	1

NO.	PART NO.	DESCRIPTION	Q'TY
60	750-3468-20	RACK SPRING	1
61	750-3469-20	CLAMPER SPRING	1
62	750-3470-20	ID-LOCK SPRING	1
63	816-2592-00	LEAD WIRE(BLU)	1

NO.	PART NO.	DESCRIPTION	Q'TY
64	750-3472-21	DR-SPRING F	2
65	750-3473-20	DR-SPRING RA	1
66	750-3474-20	DR-SPRING RB	1
67	750-3475-21	DR-SPRING C	1



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ELECTRICAL PARTS LIST

Main PWB section(B1)

Note) Several different parts of the same reference number are alternative parts. One of those parts is used in the set.

The parts on marks are used PN-2445M-A, M-B, M-C.

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
ANT101	092-0702-00	ANT RECEPT	C502	168-5612-55	560pF	C570	178-1242-78	0.12 μ F
BL101		AM/FM TUNER		168-5612-55				(M-D,M-E,M-F,M-G)
C104	119-0000-05		C505	166-2201-50		C571	178-2242-78	•
C114 C116	166-1007-50	' '	C506 C508	166-2201-50		C571	178-1242-78	(M-A,M-B,M-C)
C116	168-1042-78 043-0277-51		C506	166-2201-50 166-2201-50		C5/1		0.12 µ F (M-D,M-E,M-F,M-G)
C118	168-1022-55		C512	166-2201-50		C573	182-1053-69	
C119	182-1073-29		C513	166-2201-50		C574	183-2253-69	
C120	042-0458-93	50V2.2 µ F	C515	166-2201-50	22pF CH	C577	178-1052-78	1 μ F(M-A,M-B,M-C)
C122	182-1073-29		C516	166-2201-50		C577	117-0000-05	
C123	182-1073-29		C529	178-2242-78		0570		(M-D,M-E,M-F,M-G)
C125 C126	182-4763-39 183-1056-68		C530 C531	178-5632-78 178-4742-78		C578 C578		1 μ F(M-A,M-B,M-C) 1/10W 0 JW
C120	168-1832-55			178-4742-78		0378		(M-D,M-E,M-F,M-G)
C128	168-4732-78			178-5632-78		C579		1 μ F(M-A,M-B,M-C)
C129	168-4732-78	·	C534	178-1842-78		C579	117-0000-05	1/10W 0 JW 1
C130	166-1201-50		C535	178-3932-78				(M-D,M-E,M-F,M-G)
C131	166-1201-50		C536	178-3932-78		C580		1 μ F(M-A,M-B,M-C)
C132 C133	166-1201-50 166-1501-50		C537 C538	166-2201-50		C580	117-0000-05	
C134	168-1022-55		C539	166-2201-50 166-2201-50		C582	183-1053-69	(M-D,M-E,M-F,M-G)
C135	168-1042-78		C540	166-2201-50		C584	166-2201-50	· ·
C136	168-1042-78		C541	166-2201-50		C585	166-2201-50	'
C137	168-1042-78	16V 0.1 µ F	C542	166-2201-50	· '	C586	166-2201-50	22pF CH
C138	168-1042-78		C543	166-2201-50		C587	166-2201-50	
C201	168-1022-55			166-2201-50			172-1041-15	
C202	168-1022-55			178-1832-78			042-0447-00	
C203 C204	166-1011-50 166-1011-50	'	C546 C547	178-1832-78 178-1032-78		C703 C704	168-2222-55 168-2222-55	
C205	166-1011-50	'	C548	178-1032-76		C705	168-2222-55	'
C206	166-1011-50		C549	178-2232-78		C706	168-2222-55	
C207	168-1042-78	16V 0.1 μ F	C550	178-3332-78	0.033 µ F	C707	168-2222-55	2200pF
C208	168-1042-78		C551	178-6832-78		C708	168-2222-55	
C212	166-8097-50		C552	178-6832-78		C709	168-2222-55	
C213 C214	184-2273-29 168-1042-78		C553	178-8232-78		C710 C711	168-2222-55 168-2222-55	'
C214	184-2273-29		C553	117-0000-05	(M-A,M-B,M-C) 1/10W 0 JW	C711	172-1041-15	
C216	168-1042-78		0000	117-0000-03	(M-D,M-E,M-F,M-G)	C713	182-1063-39	
C217	042-0403-55		C554	178-8232-78	, , , , , ,	C714	183-6843-69	'
	042-0403-55				(M-A,M-B,M-C)	C802	182-4763-39	
C219	168-1042-78		C554	117-0000-05		C803	182-1063-39	•
C301	168-4722-55		C555	170 1040 70	(M-D,M-E,M-F,M-G)	C804	182-4763-19	
C303 C306	182-4763-39 184-2273-29		C555	178-1242-78	(M-A,M-B,M-C)	C805 C806	182-4763-19 182-1063-39	
C307	182-1063-39		C555	117-0000-05		C807	182-1063-39	
C311	183-1063-37				(M-D,M-E,M-F,M-G)	C808	168-1042-78	
C312	183-1063-37	16V10 µ F	C556	178-1242-78		C809	184-4773-39	
C313	183-1063-37				(M-A,M-B,M-C)			35V4.7 µ F NP
C314	183-1063-37		C556	117-0000-05		C811	168-1042-78	
C315 C316	182-2263-19 182-1053-69		C557	178-8232-78	(M-D,M-E,M-F,M-G)	C812 C813	168-1042-78 168-1042-78	
C318	178-1042-78		C557	178-1242-78		CCT201		1/32W 0 × 4J
C319	178-1042-78		C559	166-2201-50			050-0140-53	
C321	182-1053-69	50 V 1 μ F	C560	166-2201-50	22pF CH	CCT203	050-0140-53	1/32W 0 × 4J
C322	178-3942-78		C561	166-2201-50			050-0140-53	
C323	178-3942-78		C562	166-2201-50			050-0140-54	
C325 C326	182-1053-69		C563 C564	178-8232-78 178-1242-78			050-0140-54	
C326	182-1053-69 178-1842-78		C564 C565	178-1242-78 168-1032-55			050-0140-54 050-0140-54	
C333	178-1842-78		C566	168-2232-55			050-0140-54	
C334	178-1842-78		C567	168-1032-55		D701	001-2015-00	
C335	178-1842-78		C568	178-6832-78	0.068 µ F	D702	001-0626-91	
C336	168-8212-55	820pF			(M-A,M-B,M-C)	D703	001-0347-34	
C337	168-8212-55		C568	178-3332-78	·	D703	001-0346-34	
C338	168-8212-55		CEGO	170 1040 70	(M-D,M-E,M-F)		001-0401-34	
C339 C340	168-8212-55 182-1063-39		C568 C569	178-1242-78 178-6832-78	0.12 µ F(M-G)	D704 D802	001-0626-91 001-0347-48	
C340	182-1063-39		0009	170-0032-70	(M-A,M-B,M-C)		001-0347-48	
C342	168-1832-55		C569	178-3332-78		D802	001-0401-40	
C343	182-1063-39	16V10 µ F			(M-D,M-E,M-F)	D803	001-0516-90	MA111
C344	182-1063-39		C569		0.12 μ F(M-G)	D804	001-0504-31	
C345	182-1063-39		C570	178-2242-78		D806	001-0504-31	
C346	182-1063-39	10 ν 10 μ Ε	<u> </u>		(M-A,M-B,M-C)	D808	001-0504-45	HZ29RJT
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REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
	001-0347-45		R115	119-3321-15		R504	119-3331-15	
	001-0346-46		R116	111-1501-98				(M-A,M-B,M-C)
D809	001-0401-45	HZS8.2JB3	R117	119-4721-15	1/16W 4.7k	R504	119-0000-05	1/16W 0 JW
	001-0347-46		R118	119-4741-15				(M-D,M-E,M-F,M-G)
	001-0401-46		R119	111-1001-98			119-2231-15	
	001-0347-47		R120	111-2221-98			119-2231-15	
IC201		uPD178076GF-540- 3BA	R121 R122	111-1031-98 119-1021-15			119-2231-15 119-2231-15	
IC301	051-3034-90		R123	111-1031-98			119-2231-15	
	051-5027-00		R124	111-2221-98			119-2731-15	
	051-3019-90		R126	119-8201-15			119-4721-15	
	051-3019-90	NJM2060V	R198	119-0000-05	1/16W 0 JW		119-1031-15	1/16W 10k
	051-3019-90		R199	119-0000-05			119-1031-15	
	051-3019-90		R201	119-1021-15			119-4721-15	
	051-2040-00		R202	119-1021-15			119-4721-15	
	074-1191-26 074-0850-08		R203 R204	119-1031-15	1/16W 0 JW		119-4721-15 119-1031-15	
	074-0650-06		R205	119-0000-03			119-1031-15	
	010-2003-04		R206	119-4731-15			119-2221-15	
	010-2230-64		R207	119-4731-15			119-0000-05	
	009-0670-71		R208	119-4731-15	1/16W 47k			(M-D,M-E,M-F)
	009-0670-01		R209	119-1041-15				1/16W 2.2k (M-G)
	076-0540-14		R210	119-1041-15		R527	119-0000-05	1/16W 0 JW
Q104	198-0669-00		R214	119-2231-15		DE07	440 0004 45	(M-D,M-E,M-F)
Q106 Q107	190-1150-00 125-2020-92		R215 R216	119-1031-15 119-1021-15			119-2221-15 119-2221-15	1/16W 2.2k (M-G)
Q107 Q107	125-2020-92		R221	119-1021-15			119-2221-15	
Q107	125-2003-31	-	R222	119-4731-15		R530		1/16W 0 JW
Q107	125-2004-92		R223	119-1031-15		1000	110 0000 00	(M-D,M-E,M-F)
Q108	190-1150-00		R224	119-1021-15		R530	119-2221-15	1/16W 2.2k (M-G)
Q304	125-2020-92	DTC114EK	R225	119-1031-15	1/16W 10k	R531	119-0000-05	1/16W 0 JW
Q304	125-2004-92		R226	119-1021-15				(M-D,M-E,M-F)
Q304	125-2005-91		R227	119-4731-15				1/16W 2.2k (M-G)
Q304	125-2031-92		R230	119-1021-15			119-2221-15	
Q305 Q305	125-9002-92 125-9003-92		R231 R232	119-1021-15 119-4731-15			119-1521-15 119-1521-15	
Q701	192-2412-00		R233	119-4731-15			119-1021-15	
Q701	192-2712-00		R234	119-1031-15			119-1021-15	
	193-2118-00		R236	119-4731-15			119-1511-15	
Q802	125-2004-92	RN1402	R243	119-1031-15	1/16W 10k		119-1511-15	
Q802	125-2031-92		R245	119-1031-15			119-1511-15	
Q802	125-2005-91		R246	119-1031-15			119-1511-15	
Q802 Q803	125-2020-92 190-1150-00		R248 R249	119-1021-15 119-0000-05			119-1541-15 119-1541-15	
Q803 Q804	125-2031-92		R301	119-0000-05			119-1541-15	
	125-2020-92		R302	119-1021-15	· ·		119-1541-15	
Q804	125-2005-91		R308	119-4731-15			119-1541-15	
Q804	125-2004-92	RN1402	R309	119-0000-05	1/16W 0 JW		119-1541-15	1/16W 150k
Q805	125-0001-91		R310	119-4731-15	-		119-1541-15	
Q805	125-0002-92		R315	119-4731-15			119-1541-15	
Q805	125-0014-92			032-0106-64			119-1511-15	
Q805 Q806	125-0024-92 193-1858-00		R317 R318	119-3011-15 032-0106-64			119-1511-15 119-1511-15	
Q800 Q807	125-9003-92		R319	111-8211-98			119-1511-15	
Q807	125-9002-92		R320	111-8211-98			119-1021-15	
Q811	193-2118-00		R323	032-0106-64	1/10W 56k 0.5%		119-1521-15	
Q812	125-9003-92		R324	119-3011-15			119-1221-15	
	125-9002-92			032-0106-64			119-1221-15	
Q813	103-2012-00		R334	119-1021-15		R573	119-2231-15	
	125-2005-91		R335	119-1021-15		DC70	440 0000 05	(M-A,M-B,M-C)
Q814 Q814	125-2020-92 125-2004-92		R342 R343	119-4721-15 119-4721-15		R573	119-0000-05	1/16W 0 JW (M-D,M-E,M-F,M-G)
	125-2004-92		R346	119-4721-15		R574	119-1831-15	
Q815	125-2004-92		R347	119-4721-15			. 10 1001-10	(M-A,M-B,M-C)
Q815	125-2020-92		R501	119-3331-15		R574	119-0000-05	1/16W 0 JW
Q815	125-2005-91				(M-A,M-B,M-C)			(M-D,M-E,M-F,M-G)
Q815	125-2031-92		R501	119-0000-05	1/16W 0 JW		119-1021-15	
Q816	193-2118-00		DE00	140 0001 1=	(M-D,M-E,M-F,M-G)		119-1021-15	
Q817	193-1306-00		R502	119-3331-15			119-1031-15	
Q818 Q818	192-2412-00 192-2712-00		R502	119-0000 05	(M-A,M-B,M-C) 1/16W 0 JW		119-1031-15 119-5131-15	
Q819	125-9002-92		11302	119-0000-05	(M-D,M-E,M-F,M-G)		119-5131-15	
Q819	125-9002-92		R503	119-3331-15			119-5131-15	
	119-2221-15				(M-A,M-B,M-C)		119-5131-15	
R112	119-2221-15	-	R503	119-0000-05	1/16W 0 JW	R583	119-1031-15	1/16W 10k
R113	119-1821-15				(M-D,M-E,M-F,M-G)	R584	119-1031-15	1/16W 10k
R114	111-2701-98	1/4VV 2/						

PN-2445M -8-

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
R585	119-1831-15		R595		1/16W 2.2k (M-G)	R704	114-2291-11	
1200		(M-A,M-B,M-C,	R595	119-2221-15		R705	119-0000-05	
	l .	M-D,M-E,M-F)	1230	119-3031-13	(M-A,M-B,M-C,	R803	111-4711-98	
R585		1/16W 82k (M-G)			(M-A,M-B,M-C, M-D,M-E,M-F)	R804	111-4711-98	-
R586	119-0231-15	·	R596		1/16W 2.2k (M-G)	R805	119-2231-15	
R587	119-1021-15	-	R597	119-5631-15		R806	119-2231-15	
R588	119-1021-15	-	15397		(M-A,M-B,M-C,	R807	119-2231-15	
1200		(M-A.M-B.M-C)			(M-A,M-B,M-C, M-D.M-E.M-F)	R808	111-8211-98	
R588		1/16W 0 JW	R597		1/16W 2.2k (M-G)	R809	111-8211-98	
1200			R598	119-2221-15	` ,	R814	111-0211-96	
R589	119-1831-15	(M-D,M-E,M-F,M-G)	K596	119-5631-15	(M-A.M-B.M-C.	R815	1119-1041-15	-
K309		(M-A,M-B,M-C)			(M-A,M-B,M-C, M-D,M-E,M-F)	R818	1111-3911-98	
R589		1/16W 0 JW	R598	110 0001 15				
K589					1/16W 2.2k (M-G)	R819	119-1041-15	
R590	119-1021-15	(M-D,M-E,M-F,M-G)	R599 R604	119-4721-15	-	R821 R822	111-2021-98 111-2021-98	
		-	R604	119-2231-15	-	-		· ·
R591	119-2221-15	-			(M-A,M-B,M-C,	R824	119-4731-15	
		(M-A,M-B,M-C,	D004		M-D,M-E,M-F)	R825	111-1801-98	
DE04		M-D,M-E,M-F)	R604		1/16W 0 JW(M-G)	R826	119-5611-15	
R591		1/16W 12k (M-G)	R605	119-2231-15	-	R827	119-4721-15	
R592	119-2221-15	I I			(M-A,M-B,M-C,	R828	111-1831-98	
	l .	(M-A,M-B,M-C,	D005	440 0000 05	M-D,M-E,M-F)	R829	111-1801-98	-
D-00		M-D,M-E,M-F)	R605		1/16W 0 JW(M-G)	R831	111-8211-98	
R592		1/16W 12k (M-G)	R606	119-2231-15	-	R832	111-8211-98	
R593	119-2221-15	-			(M-A,M-B,M-C,	R833	111-3911-98	
	l .	(M-A,M-B,M-C,			M-D,M-E,M-F)	SUP101		DSP-201M-S00B
		M-D,M-E,M-F)	R606		1/16W 0 JW(M-G)	TC201	004-1580-02	
R593		1/16W 12k (M-G)	R607	119-2231-15		TM101	073-0762-90	
R594	119-2221-15	-			(M-A,M-B,M-C,	TM801	073-0762-90	
		(M-A,M-B,M-C,	l		M-D,M-E,M-F)	VR102	012-5203-56	
		M-D,M-E,M-F)	R607		1/16W 0 JW(M-G)	X201	061-3055-00	4.5MHz
R594		1/16W 12k (M-G)	R619	119-4721-15	-			
R595	119-5631-15	I I	R701	119-1031-15				
		(M-A,M-B,M-C,	R702	119-5611-15				
		M-D,M-E,M-F)	R703	111-1531-98	1/4W 15k			

Switch PWB section(B2)

		- ()						
REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
C901	168-1042-78	16V 0.1 μ F	D906	001-0516-90	MA111	S902	013-6300-51	SJPGAA032A
C902	168-1042-78	16V 0.1 µ F	D907	001-0516-90	MA111	S903	013-6300-51	SJPGAA032A
C903	168-6812-55	680pF	D908	001-0516-90	MA111	S904	013-6300-51	SJPGAA032A
C904	168-1042-78	16V 0.1 µ F	IC901	051-6000-20	LC7583NW	S905	013-6300-51	SJPGAA032A
C905	042-0423-92	6.3V4.7 µ F	J901	074-1151-14	14P	S906	013-6300-51	SJPGAA032A
C906	168-1042-78	16V 0.1 µ F	PL901	017-0447-59	8V105mA	S907	013-6300-51	SJPGAA032A
C907	042-0423-92	6.3V4.7 µ F	PL902	017-0447-59	8V105mA	S908	013-6300-51	SJPGAA032A
CCT901	050-0140-54	1/32W 1k ×4J	PL903	017-0433-58	14V40mA	S909	013-6300-51	SJPGAA032A
CCT902	050-0140-54	1/32W 1k ×4J	PL904	017-0433-58	14V40mA	S910	013-6300-51	SJPGAA032A
D901	001-0516-90	MA111	PL905	017-0433-58	14V40mA	S912	013-6302-50	SKQMAL
D902	001-0516-90	MA111	PL906	017-0433-58	14V40mA	S913	013-6300-51	SJPGAA032A
D903	001-0516-90	MA111	PL907	017-0433-58	14V40mA	S914	013-6300-51	SJPGAA032A
D904	001-0516-90	MA111	R902	119-6831-15	1/16W 68k	S915	013-6300-51	SJPGAA032A
D905	001-0516-90	MA111	S901	013-6300-51	SJPGAA032A	VR903	016-0010-15	ROTALY ENCODER

CD PWB section(B3):CD mechanism

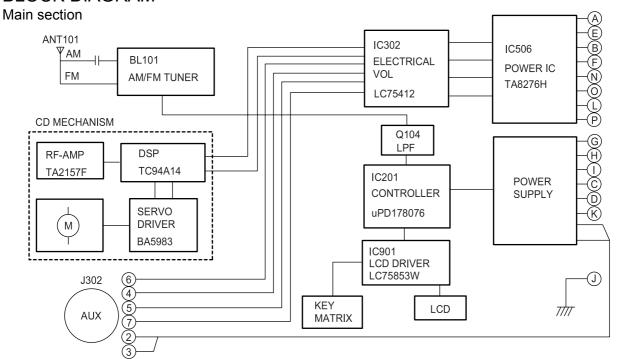
REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	
C101	168-1042-78	0.1 µ F	C124	163-1073-05	4V100 μ F	C303	043-0533-50	0.047 μ F	
C102	045-4701-50	47pF	C125	168-1042-78	0.1 μ F	D201	001-0516-90	MA111	
C103	046-4722-58	4700pF	C126	168-1042-78	0.1 μ F	IC101	051-6376-00	TC94A14FA	
C104	168-1042-78	0.1 µ F	C129	178-1052-78	1μF	IC102	051-3279-90	BA033LBSG	
	046-1532-78	0.015 μ F	C201	163-3363-05	4V33 μ F	IC201	051-5710-90	TA2157F	
C106	046-1032-78	0.01 μ F	C202	168-1042-78	0.1 μ F	IC301	051-6049-08	BA5983FP-E2	
	046-1032-78	0.01 μ F	C203	178-1052-78	1μF	J101	074-1228-76	26P	
C108	046-4722-58	4700pF	C204	163-1073-05	4V100 μ F	J201	074-1138-65	15P	
C109	046-1522-58	1500pF	C205	163-3363-05	4V33 μ F	J301	074-1138-60		
C110	046-3332-78	0.033 μ F	C206	168-1042-78	0.1 µ F	L101	010-2285-57	BLM21B102SPT	
C111	168-1042-78	0.1 μ F	C207	043-0533-50	0.047 μ F	L102	010-2285-57	BLM21B102SPT	
C112	046-3332-78	0.033 μ F	C208	046-6822-58	6800pF	L103	010-2285-57	BLM21B102SPT	
C113	168-1042-78	0.1 μ F	C209	168-1042-78	0.1 µ F	L104	010-2285-57	BLM21B102SPT	
C114	168-1042-78	0.1 μ F	C210	043-0533-50	0.047 μ F	L105	010-2285-57	BLM21B102SPT	
C115	046-4712-58	470pF	C211	168-1042-78	0.1 μ F	L401	010-3050-93	10 μ H	
C116	046-4712-58	470pF	C212	168-1042-78	0.1 μ F	Q201	131-1188-50	2SB1188	
C117	043-0533-50	0.047 μ F		045-5096-50	5pF	R102	033-5621-15	1/16W 5.6k	
C118	043-0533-50	0.047 μ F		045-5601-50		R104	033-4731-15	1/16W 47k	
C119	045-2701-50	27pF	C215	043-0533-50	0.047 μ F	R105	033-1041-15	1/16W 100k	
C120	045-1801-50	18pF	C216	178-1052-78	1μF	R108	033-1531-15	1/16W 15k	
C121	163-1063-35	16V10 μ F	C217	045-1011-50	100pF	R109	033-1031-15	1/16W 10k	
C122	178-1052-78	1μF	C301	163-1073-35	16V100 µ F	R110	033-1051-15	1/16W 1M	
C123	046-1032-78	0.01 µ F	C302	168-1042-78	0.1 µ F	R111	033-3321-15	1/16W 3.3k	

REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
R114	033-2211-15	1/16W 220	R205	033-1041-15	1/16W 100k	R215	033-1031-15	1/16W 10k
R115	033-2211-15	1/16W 220	R206	033-1041-15	1/16W 100k	R217	033-1041-15	1/16W 100k
R116	033-1031-15	1/16W 10k	R207	033-1041-15	1/16W 100k	R218	033-2211-15	1/16W 220
R117	033-1021-15	1/16W 1k	R208	033-8231-15	1/16W 82k	R301	117-6811-15	1/16W 680
R131	033-4711-15	1/16W 470	R209	033-6811-15	1/16W 680	R304	033-3921-15	1/16W 3.9k
R132	033-2211-15	1/16W 220	R210	033-6831-15	1/16W 68k	R305	033-3921-15	1/16W 3.9k
R201	117-2201-15	1/10W 22	R211	033-1831-15	1/16W 18k	R306	033-1041-15	1/16W 100k
R202	117-2201-15	1/10W 22	R212	033-2721-15	1/16W 2.7k	R307	033-2211-15	1/16W 220
R203	033-1041-15	1/16W 100k	R213	033-1011-15	1/16W 100	X102	060-1528-90	16.934M
R204	033-1041-15	1/16W 100k	R214	033-1021-15	1/16W 1k			

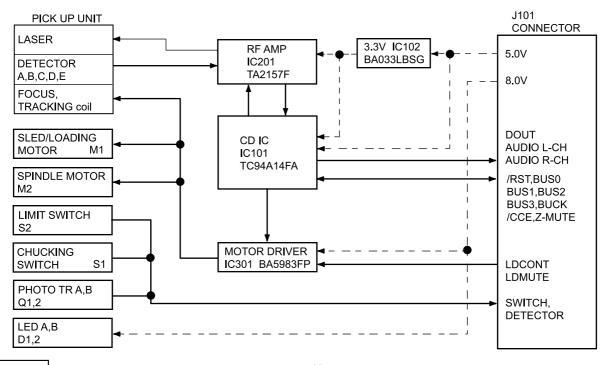
LED PWB section(B4):CD mechanism

		<u>` </u>						
REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION	REF No.	PART No.	DESCRIPTION
D1	001-7058-90	AN1105W-RR	Q1	060-4015-90	PS1192H	S1	013-7414-50	CHUCKING
D2	001-7058-90	AN1105W-RR	Q2	060-4015-90	PS1192H	S2	013-7413-50	LIMIT
J1	074-1138-60	10P						

BLOCK DIAGRAM



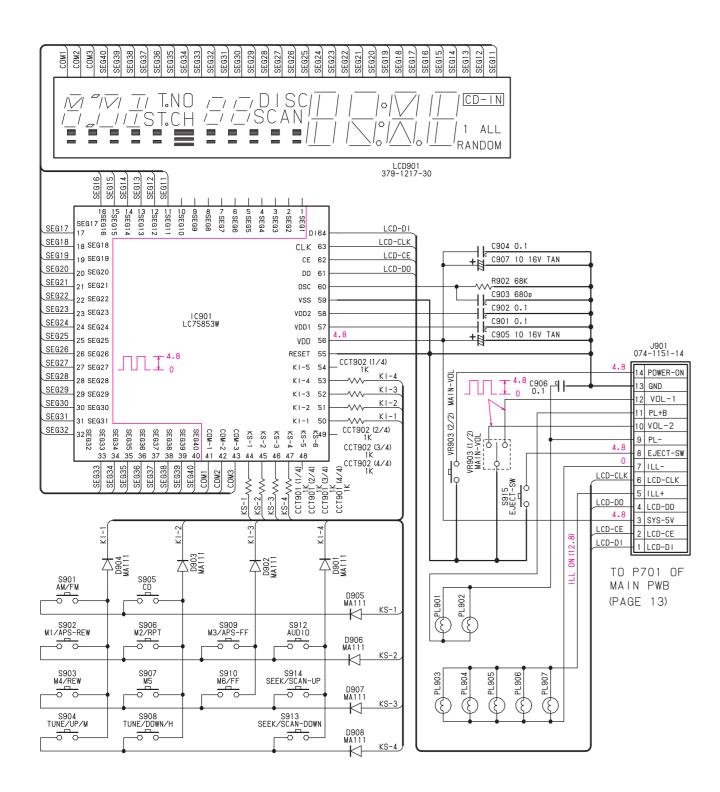
CD mechanism section



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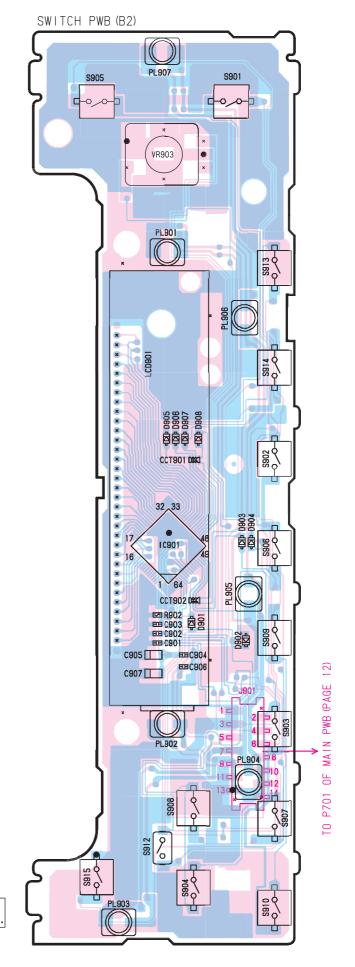
■CIRCUIT DIAGRAM

Switch PWB section(B2)

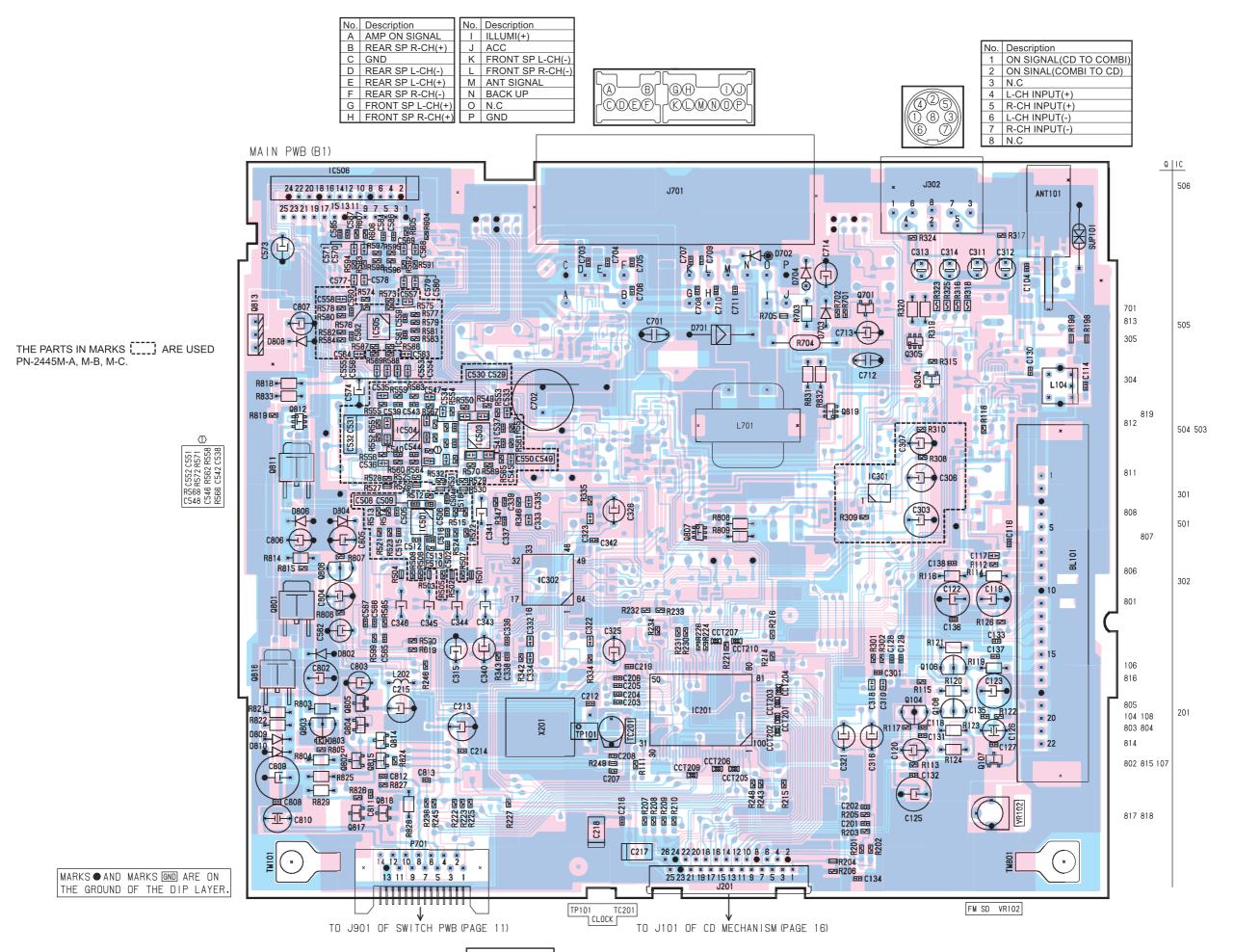


■PRINTED WIRING BOARD

Switch PWB section(B2)

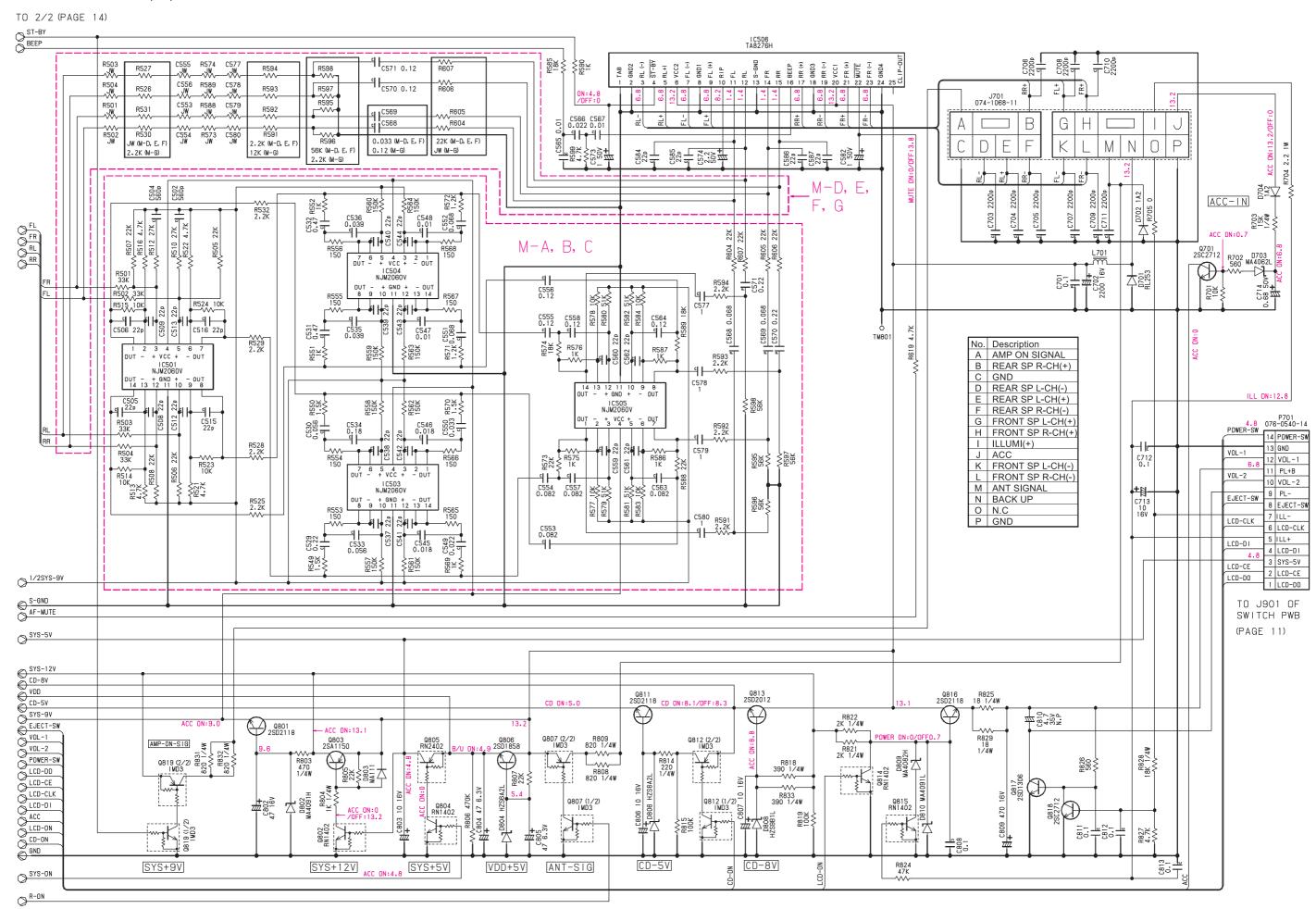


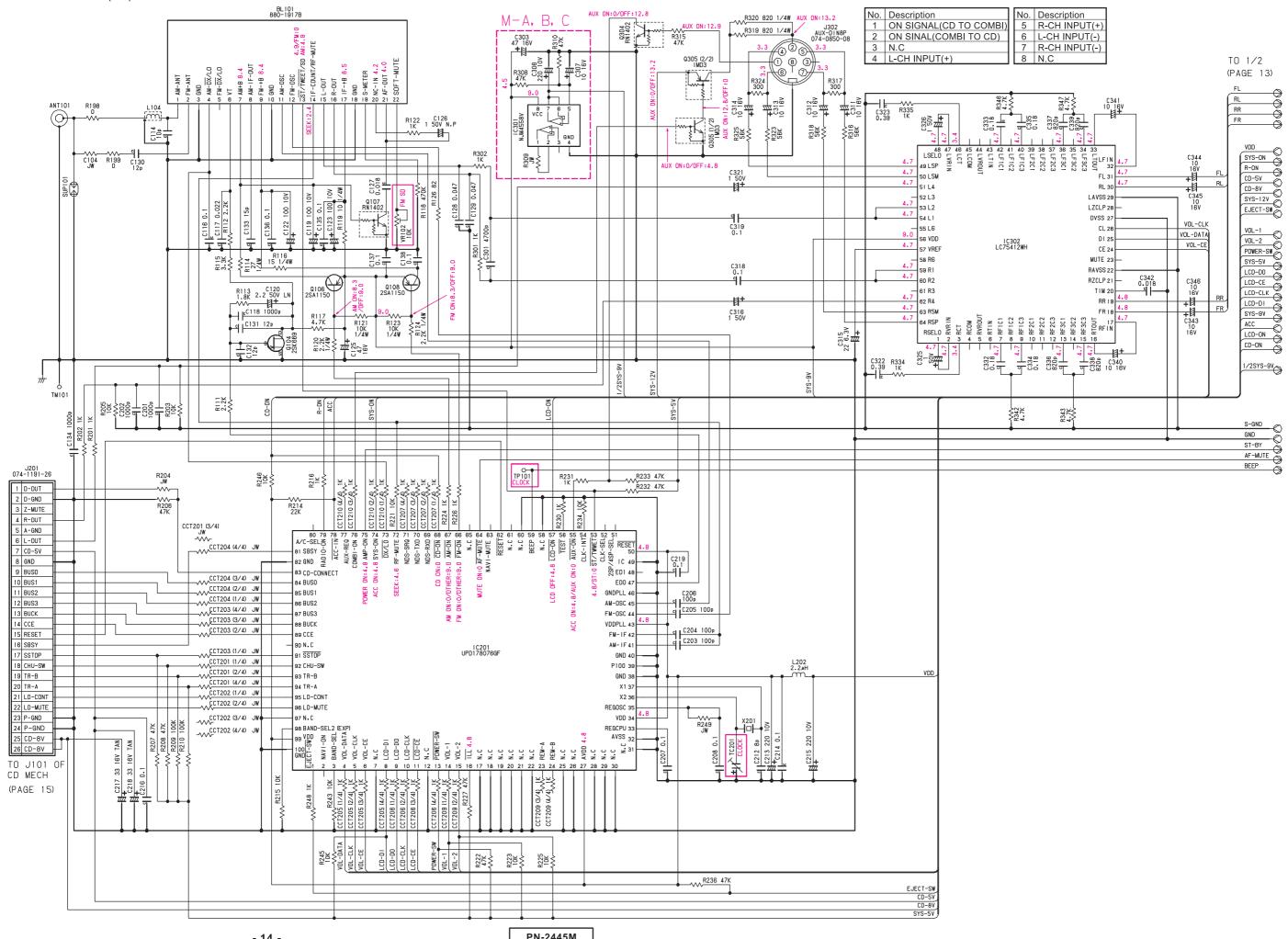
MARKS ● AND MARKS GND ARE ON THE GROUND OF THE DIP LAYER.

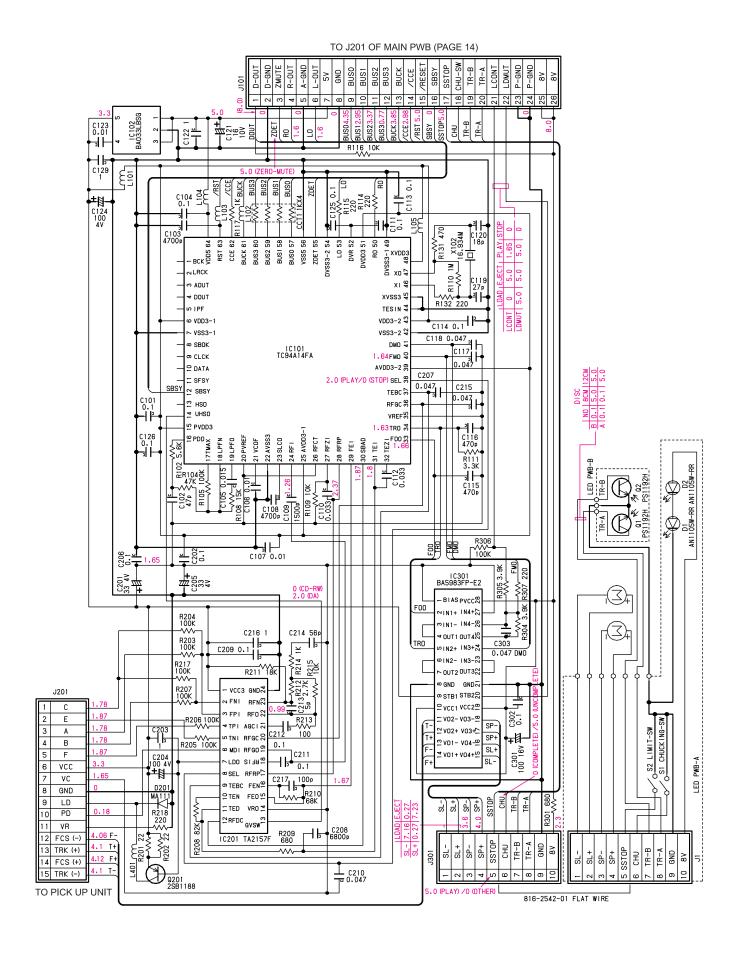


■CIRCUIT DIAGRAM

Main PWB section(B1) 1/2

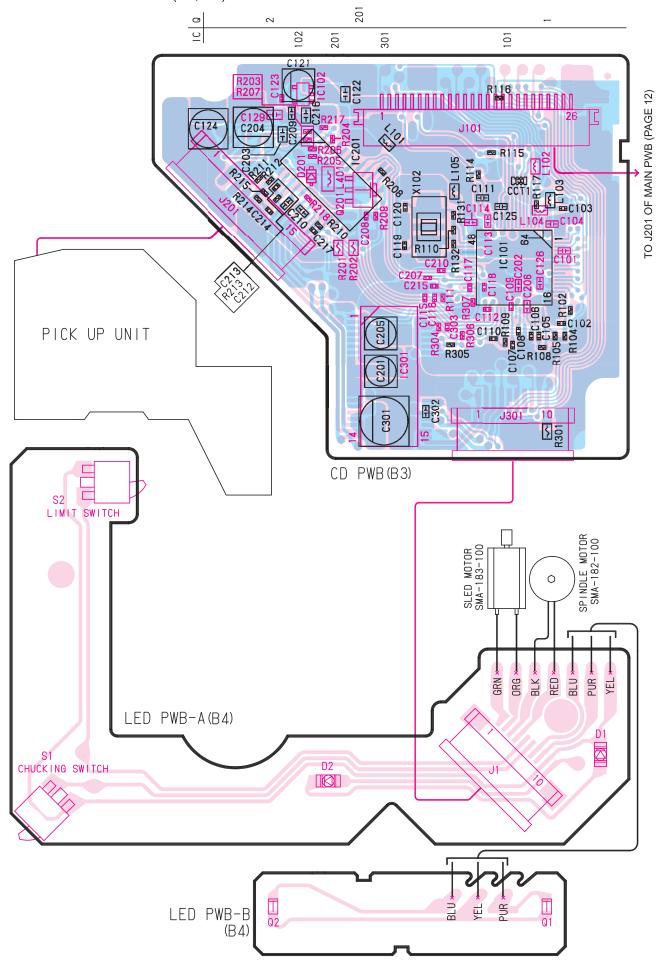






■PRINTED WIRING BOARD

CD mechanism section(B3, B4)



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